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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,390	09/25/2003	Joseph P. Corrado	POU920030127US1	4239
7590 10/04/2005			EXAMINER	
Philmore H. Colburn II Cantor Colburn LLP 55 Griffin Road South Bloomfield, CT 06002			CARPIO, IVAN HERNAN	
			ART UNIT	PAPER NUMBER
			2841	

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/671,390	CORRADO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Ivan H. Carpio	2841	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                                              |                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9-25-03</u> . | 6) <input type="checkbox"/> Other: ____                                                |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Glover (US 4,846,699).

With respect to claim 1 Glover teaches a multiple card enclosure (Fig.1) comprising: a mother card cage (Fig. 1, element 10) having a mother card (Fig. 1, element 76) enclosed therein; a daughter card (Fig. 1, element 14) removably positioned within said cage for connecting said daughter card with the mother card, said daughter card having a power tab (Fig. 3, element 58) extending from a first edge defining said daughter card and a signal connector (Fig. 2, element 78) extending from a second edge perpendicular to said first edge, said signal connector configured to connect to said mother card for signal interconnection there-between; and a guide means (Fig. 1, element 26) for guiding said daughter card into said mother card cage and in signal interconnection therewith, said guide means configured to provide power into and out (Fig. 1, elements 18 and 18' provide power in and out) of said daughter card via connection with said power tab.

With respect to claim 2 and with all the limitations of claim 1, Glover teaches that said guide means includes a receptacle (Fig. 2, element 30) integrated therewith, said

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receptacle aligned with said power tab and provides power (column 5, lines 20 – 26) to said power tab when said signal connector is operably connected to said mother card.

With respect to claim 3 and with all the limitations of claim 2, Glover teaches that said guide means are disposed within said cage on at least one of one side and opposite sides (Fig. 2, element 26 and 26') of said daughter card having at least one corresponding power tab extending therefrom.

With respect to claim 4 Glover teaches a multiple card enclosure (Fig. 1) comprising: a mother card cage (Fig. 1, element 10) having a mother card (Fig. 1, element 76) enclosed therein; a daughter card (Fig. 1, element 14) removably positioned within said cage for connecting said daughter card with the mother card, said daughter card having a power tab (Fig. 3, element 58) extending from a first edge defining said daughter card and a signal connector (Fig. 2, element 78) extending from a second edge perpendicular to said first edge, said signal connector configured to connect to said mother card for signal interconnection there between; and at least one guide rail (Fig. 1, element 26) connecting said daughter card to said enclosure, said daughter card being slidably disposed on said rail, and being guidable into said cage using said rail; said at least one guide rail affixed to said cage, said power tab extending from said daughter card being slidably received by said guide rail to allow said daughter card to be slid into and out of said cage, said guide rail having a power receptacle (Fig. 2, element 30) disposed within said rail, said receptacle configured to operably provide power (column 5, lines 20 – 26) interconnection between said tab and a power supply (Fig.1, element 16) when said daughter card is plugged into said

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cage; wherein said guide rail aligns said tab relative to said receptacle for power interconnection there between, and guides said signal connector to the mother card for signal interconnection there between by guiding said tab within said rail when said daughter card is slid into said cage.

With respect to claim 5 and with all the limitations of claim 4, Glover teaches that said at least one guide rail includes two guide rails, each being disposed within said cage and on opposite sides (Fig. 2, element 26 and 26') of said daughter card having at least one corresponding tab extending therefrom.

With respect to claim 6 and with all the limitations of claim 4, Glover teaches that the power tab is operably connected to said power supply via at least one of an electrical bus (Fig. 1, 18 and 18') and a conductive wire connected there between.

With respect to claim 7 and with all the limitations of claim 4, Glover teaches that said power tab includes a plurality of power tabs (column 6, lines 20-42) aligned to electrically interconnect with a corresponding receptacle (Fig. 2, element 30) extending within said at least one rail.

With respect to claim 9 and with all the limitations of claim 4, Glover teaches that said power tab is operably connected to a bus bar (Fig. 2, element 32) extending across said daughter card, said bus bar configured to provide electrical power to electrical components disposed on said daughter card.

With respect to claim 10 and with all the limitations of claim 8, Glover teaches that said receptacle includes a power connection fork (Fig. 3, element 32) configured to receive two sides defining said tab and electrically coupled to said corresponding bus.

With respect to claim 11 and with all the limitations of claim 10, Glover teaches that said power connection fork is a power louver (note Fig. 2, element 84) electrically coupled to said corresponding bus.

With respect to claim 12 and with all the limitations of claim 8, Glover teaches that said corresponding bus includes a plurality of stacked busses (Fig. 1, element 18') insulated from one another via an insulative layer.

With respect to claim 15 Glover teaches a central electronics complex of a computer system, comprising: a cage (fig. 1, element 10) configured to be received in a rack; a power supply (fig.1, element 16) disposed in said cage, said power supply configured to provide electrical power therein; a backplane (Fig. 2, element 76) disposed in said cage, said backplane including a mother card (Fig. 2, element 76) having at least one card slot (Fig. 2, element 74) on a surface thereof; a plurality of daughter cards (Fig. 1, elements 14) removably positioned within said cage, each daughter card configured to connect with a corresponding card slot in said mother card, said each daughter card having a power tab (Fig. 3, element 58) extending from a first edge defining said each daughter card and a signal connector (Fig. 2, element 78) extending from a second edge perpendicular to said first edge, said signal connector configured to connect to said mother card for signal interconnection there between; and at least one guide rail (Fig. 3, element 26) connecting said each daughter card to said cage, said each daughter card being slidably disposed on said rail, and being guidable into said cage using said rail; said at least one guide rail affixed to said cage, said power tab extending from said each card being slidably

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received by said guide rail to allow said each daughter card to be slid into and out of said cage, said guide rail having a power receptacle (Fig. 2, element 30) disposed within said rail, said receptacle configured to operably provide power (column 5, lines 20 – 26) interconnection between said tab and said power supply when said each daughter card is plugged into said cage; wherein said guide rail aligns said tab relative to said receptacle for power interconnection there between, and guides said signal connector to the slot of the mother card for signal interconnection there between by guiding said tab within said rail when said daughter card is slid into said cage.

With respect to claim 16 and with all the limitations of claim 15, Glover teaches that said at least one guide rail includes two guide rails (Fig. 2, elements 26 and 26'), each being disposed within said cage and on opposite sides of said daughter card having at least one corresponding tab extending therefrom.

With respect to claim 17 and with all the limitations of claim 15, Glover teaches that said power tab is operably connected to said power supply via at least one of an electrical bus (Fig. 1, 18 and 18') and a conductive wire connected there between.

With respect to claim 18 and with all the limitation of claim 15, Glover teaches that said power tab includes a plurality of power tabs (column 6, lines 20-42) aligned to electrically interconnect with a corresponding receptacle (Fig. 2, element 30) extending within said at least one rail.

With respect to claim 20 and with all the limitations of claim 15, Glover teaches that said power tab is operably connected to a bus bar (Fig. 2, element 32) extending

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across said daughter card, said bus bar configured to provide electrical power to electrical components disposed on said daughter card.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 8,10-13 and 19, 21-24 rejected under 35 U.S.C. 103(a) as being unpatentable over Glover.

With respect to claim 8 and 19 with all the limitations of claim 7 and 18 respectively, Glover teaches power tabs receive a voltage via corresponding bus connected to a receptacle disposed within the guide rail. Glover does not specifically teach that each tab receives a unique voltage. First note that looking at traces 62 of figure 2 we note that each component on the daughter card has its own set of traces each capable of receiving a unique voltage. Different components are sensitive to different voltage levels, therefore if we have a plurality of different components with different voltage specifications then we will need to provide appropriate different voltages. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide each power tab, taught by Glover, with any necessary voltage including providing each tab with a unique voltage for the purpose of satisfying component properties.



With respect to claim 10 and 21 and with all the limitations of claim 8 and 19 respectively, Glover teaches that said receptacle includes a power connection fork (Fig. 3, element 32) configured to receive two sides defining said tab and electrically coupled to said corresponding bus and power supply.

With respect to claim 11 and 22 and with all the limitations of claim 10 and 21 respectively, Glover teaches that said power connection fork is a power louver (note Fig. 2, element 84) electrically coupled to said corresponding bus and power supply.

With respect to claim 12 and 23 and with all the limitations of claim 8 and 19 respectively, Glover teaches that said corresponding bus includes a plurality of stacked busses (Fig. 1, element 18') insulated from one another via an insulative layer.

With respect to claim 13 and 24 and with all the limitations of claim 7 and 18 respectively, Glover teaches power tabs (Fig. 3, element 58) on either the top the bottom or both sides of the daughter card. Glover does not specifically teach that power tabs extend from a middle portion of the edge of said daughter card. The placement of the power tabs is arbitrary and depends on the design and placement of the components and guide bar, the power tabs can be placed anywhere on the card including the middle portion. It would have been obvious to one of ordinary skill in the art at the time of the invention to place the power tabs taught by Glover anywhere on the daughter board, including the middle portion, so long as they are placed to align with the power connectors of the guide bar.

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Claims 14 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glover in view of Otis (US 6,487,089)

With respect to claims 14 and 25 and with all the limitations of claims 4 and 15 respectively, Glover teaches all the limitations except that said daughter card includes a reworkable EMC tailstock opposite said signal connector. Otis teaches a reworkable EMC tailstock (column 1, lines 40-45, and fig. 8 element 44) coupled to a circuit board. It would have been obvious to one of ordinary skill in the art at the time of the invention to connect the EMC tailstock, taught by Otis, to the opposite side of the signal connector on the daughterboard taught by Glover, because it provides physical support as well a electromagnetic radiation shielding (column 1, lines 40-45).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents 6128196 and 6480391 both disclose a chassis with daughter board, motherboards and guides. US Patents 4838798 and 5903432 both disclose cages with power guides.

### ***Conclusion***

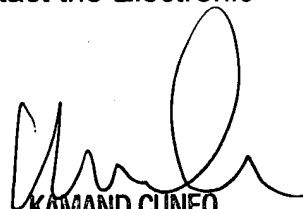
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ivan H. Carpio whose telephone number is 571-272-8396. The examiner can normally be reached on M-R 6:00am - 4:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kammie Cuneo can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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